Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of Application of	)	
	)	
CHEVRON USA, INC.	)	FCC File No. 0001109771
	)	
Request for Waiver to Allow Temporary Fixed, Wideband Digital Operation in the Gulf Area	)	

ORDER

Adopted: July 30, 2004 **Released: August 16, 2004**

By the Chief, Public Safety and Critical Infrastructure Division, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. We have before us an application and waiver request filed by Chevron USA, Inc. (Chevron) for authority to operate a new industrial/business radio system on four frequency pairs in the 490-491 and 493-494 MHz bands, at temporary locations in the Gulf of Mexico and along the adjacent Mississippi and Louisiana shorelines.[1] For the reasons discussed herein, we grant Chevron's waiver request.

II. BACKGROUND

A. Special Provisions in the Southern Louisiana-Texas Offshore Zone

2. In August of 1976, the Commission established a new service, the Offshore Radio Service (ORS).[2] ORS was designed to meet the growing communications needs of the petrochemical companies operating in the Outer Continental Shelf region of the Southern Louisiana Gulf Coast, and was intended for use primarily by these companies.[3]

3. The Commission reallocated UHF-TV Channel 17 frequencies (488-494 MHz) to the Domestic Public and Private Land Mobile Radio Services in the offshore Louisiana Gulf Coast area. The Commission assigned four megahertz of this spectrum to ORS use[4] and assigned the remaining two megahertz to the Private Land Mobile Radio (PLMR) Services for private offshore use.[5] In 1976, wireless data communications and digital signal modulation were virtually nonexistent; therefore, the Commission designed Section 90.315 to provide for general voice grade communications.

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[1] Chevron Waiver Request, FCC File Number: 0001109771, (December 23, 2002)

[2] Report and Order, Docket No. 20368, 41 FR 33883 (August 11, 1976).

[3] The Outer Continental Shelf is the seabed extending from the three mile limit outward to a water depth of 200 meters (656 ft.).

[4] 47 C.F.R. § 22.1001.

[5] 47 C.F.R. § 90.315.

4. In 1985, the Commission added the 476-488 MHz band (TV channels 15 and 16) to ORS and expanded the geographical service area for ORS in the Gulf region.[6] The Commission allocated a portion of the Channel 15 and Channel 16 spectrum for PLMR use.[7]

5. In 1995, the Commission adopted extensive rule changes to promote the efficient use of the PLMR service and facilitate the introduction of advanced technologies.[8] As a result, the Commission amended Section 90.315 of its rules. Moreover, the Commission sought to improve the efficiency of spacing between frequency pairs in Section 90.315 by changing the spacing from 25 kHz to 6.25 kHz and allowing applicants to request bandwidths other (greater) than 25 kHz.[9] The remainder of Section 90.315 has remained essentially unchanged since its inception in 1976.

B. Chevron's Waiver Request

6. On December 23, 2002, Chevron applied for four 490/493 MHz frequency pairs at temporary locations in the Gulf of Mexico and the adjacent Mississippi and Louisiana coast.[10] Chevron proposes to utilize a 50 kHz bandwidth with a D1[11] type emission. Chevron has calculated that a 50 kHz bandwidth will enable it to provide data and voice communications to each drill rig and lift boat in a single radio link. Chevron asserts that a 50 kHz bandwidth can provide one 64 kb/s data channel and four 16 kb/s voice channels. However, the maximum bandwidth permitted for 470-512 MHz channels is 25 kHz[12] and the Commission's rules do not authorize the use of the D1 emission in the Southern Louisiana-Texas Offshore Zone.[13] Operating at 50 kHz bandwidth would also require a waiver of the equipment certification requirements.[14] In addition, Chevron seeks a waiver of the minimum distances between shore or offshore stations and TV stations, 241 km (150 mi) for co-channel[15] and 128 km (80 mi) for adjacent channel.[16] Chevron's proposed operations would approach points located 117.8 miles from co-channel TV Station W17CG operating on TV Channel 17, and 51.5 miles from adjacent Channel TV Station KLTL-TV operating on TV Channel 18. To minimize potential interference, Chevron proposes to operate at no more than 2 watts Effective Radiated Power (ERP). Chevron submitted an engineering statement that illustrates interference protection to the respective Grade B contours.[17] We also note that the Commission recently modified section 90.209 requiring all non-public safety stations to operate on

[6] Frequency Allocation to the Offshore Radio Service, FCC 84-509, 50 FR 12021, March 27, 1985

[7] 47 C.F.R. § 90.315.

[8] *See* Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, *Report and Order and Further Notice of Proposed Rulemaking,* PR Docket No. 92-235, 10 FCC Rcd 10313, ¶ 41 (1995) ("*Refarming Report and Order and Further Notice*").

[9] *Id.*

[10] Chevron Waiver Request, FCC File Number: 0001109771, (December 23, 2002).

[11] The symbols in "D1" are defined in 47 C.F.R. § 90.210, although in reverse order, and emission designators have three symbols. Chevron requests W1D emissions. The "W" represents modulation of the carrier wave by two or more of the following modes: amplitude, angle, pulse. The "1" represents digital modulation, no subcarrier. The "D" represents data, telemetry, and telecommand information.

[12] 47 C.F.R. § 90.173(m).

[13] 47 C.F.R. § 90.315(c).

[14] 47 C.F.R. § 90.203(a).

[15] 47 C.F.R. § 90.315(d).

[16] 47 C.F.R. § 90.315(g).

[17] Chevron Engineering Statement, FCC File Number: 0001109771, (December 23, 2002)

channels with a bandwidth of 12.5 kHz or less beginning January 13, 2013[18]. Consequently, the system that Chevron proposes to operate would appear to require a waiver of Sections 90.173(m), 90.203(a), 90.209, 90.210(c), 90.315(c), 90.315(d), and 90.315(g) of the Commission's Rules.[19]

7. On March 25, 2003, the Wireless Telecommunications Bureau ("Bureau") placed Chevron's December 2002 application and waiver request on public notice.[20] On April 24, 2003, the Commission received one comment in opposition filed by Loli, Inc. (Loli). Loli is an Arizona corporation and owner of a 218-219 MHz Radio Service license for the Gulf of Mexico. We fail to see how Chevron's proposed service in the 488-494 MHz band adversely affects Loli's 218-219 MHz operations in the Gulf Region. Loli's petition does not demonstrate how the grant of Chevron's waiver would adversely affect its operations, which is cause for dismissal under 47 C.F.R. § 1.106(b)(1).[21] We therefore dismiss Loli's petition without consideration.

III. DISCUSSION

8. To obtain a waiver of the Commission's Rules, a petitioner must demonstrate either that the underlying purpose of the rule(s) would not be served or would be frustrated by application to the present case and that grant of the waiver would be in the public interest;[22] or that, in view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.[23] We find that Chevron has demonstrated that grant of the waiver is warranted because the circumstances presented would be frustrated by the application of the rules and a waiver of the rules in this instance would serve the public interest.

A. Transmitter Certification

9. The Commission's rules require licensees operating on the subject frequencies to use transmitters that have been certificated for use under Part 90.[24] Chevron is seeking a waiver of this equipment certification requirement to use Microwave Data Systems, Inc. (MDS) equipment. The Commission has certified this equipment for use under Part 74 with 25 kHz and 50 kHz channels and under Part 90 with 25 kHz channels.[25] However, Chevron states it "has been unable to identify any

[18] *See* In the Matter of Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, FCC 03-34 WT Docket No. 99-87, RM-9332, Released February 25, 2003.

[19] FCC File No. 0001109771

[20] *See* Wireless Telecommunications Bureau Seeks Comment on Request for Waiver by Chevron USA, Inc. to Allow Temporary Fixed, Wideband, Digital, Operation in the Gulf Area, *Public Notice*, DA 03-859, released March 25, 2003.

[21] See 47 CFR § 1.106(b)(1), "Subject to the limitations set forth in paragraph (b)(2) of this section, any party to the proceeding, or any other person whose interests are adversely affected by any action taken by the Commission or by the designated authority, may file a petition requesting reconsideration of the action taken. If the petition is filed by a person who is not a party to the proceeding, it shall state with particularity the manner in which the person's interests are adversely affected by the action taken, and shall show good reason why it was not possible for him to participate in the earlier stages of the proceeding."

[22] 47 C.F.R. § 1.925(b)(3)(i).

[23] 47 C.F.R. § 1.925(b)(3)(ii).

[24] 47 C.F.R. § 90.203(a).

[25] *See* Exhibit A and Exhibit B, Chevron Waiver Request, FCC File Number: 0001109771, (December 23, 2002)

existing equipment that is certified for use under Part 90 with 50 kHz channels, presumably because 50 kHz channels typically are not available for use under Part 90. Thus, there are no alternatives available to Chevron that would comply with the equipment certification rule."[26] As Chevron points out, the Commission has not certified equipment for 50 kHz channels because 50 kHz channels are not available in this band. In this case, the Commission certified the MDS equipment for 25 kHz and 50 kHz operation under Part 74 and 25 kHz operation under Part 90. As such, we believe that granting a waiver of Section 90.203(a) does not undermine the purpose of the transmitter requirement since the equipment meets the required radiated and conducted emissions limits beyond the channel edge[27], the frequency stability requirements of Section 90.213 and the power limits of 90.205.

B. Emission Masks

10. Chevron is seeking a waiver of the emission mask requirements set forth in 90.210(c) and 90.315(c). The emission masks in Section 90.315(c) date back to the original 1976 ORS rulemaking and have not been updated to reflect the system presently in use.[28] ORS was designed to provide general voice grade communications, which is what the equipment available in 1976 was capable of providing. The field of wireless communications, especially wireless digital communications has experienced a quantum leap in technology since 1976. In reference to the emission designators, Chevron states advances in technology alleviate or eliminate concerns that may have been present at the time a particular rule was adopted, and while such technological advances ultimately should be addressed through the rule amendment process, individualized rule waivers should be considered appropriate where strict application of the rule would serve no purpose. Such is the case here, given that Chevron's proposed operations, including the contemplated type of emissions, have been properly coordinated, and there is no reason to believe that its operations would be incompatible with those of other users in the relevant frequency band.

11. Furthermore, it should be noted that the equipment authorization for Part 90 of the proposed equipment provides for D1 emissions."[29] Chevron notes, however, that the engineering test results that were submitted in support of the equipment certification application for the MDS LEDR equipment under Section 74.462(c), would satisfy an "extrapolated" 50 kHz channel equivalent emissions mask as defined in Section 90.210(c), for any emissions outside of the 50 kHz channel.[30] Chevron further states: "It should be noted that because digital modulation has a "square" spectral dispersion, no digital modulation could meet the emissions mask defined in Section 90.210(c) for analog modulation and still provide the spectral efficiency that is achieved by the proposed equipment. Moreover, the "interference-mitigating" purposes of Section 90.210(c) are not thwarted, since the measured emissions of the proposed equipment are below the required emissions at and beyond the channel edge."[31] Section 90.315(c) allows emissions with either type "A" amplitude modulation or type "F" frequency modulation. Type "D1" digital modulation is not included in section 90.315(c), most likely because it was not generally available when this rule was drafted in 1976. We agree with Chevron's analysis and find no reason to exclude D1 emissions from the Gulf of Mexico. In this regard, we believe that digital modulation most probably was not previously authorized because in the subject band digital equipment was not available when the rules

[26] Chevron Waiver Request, FCC File Number: 0001109771 (December 23, 2002).

[27] *See* the "extrapolated" emission mask discussion paragraph 11 below.

[28] Two digit emission designators such as F9 and A9 were updated to a three digit system in 1984. *See* "Provision for New System of Emission Designators Described in Article 4 of the International Telecommunication Union Radio Regulations", Docket No. 80-739; FCC 84-510, 49 FR 48694**,** December 14, 1984

[29] Chevron Waiver Request, FCC File Number: 0001109771 (December 23, 2002).

[30] *See* Exhibit C. FCC File No. 0001109771, Request for Rule Waivers (December 23, 2002).

[31] Chevron Waiver Request, FCC File Number: 0001109771 (December 23, 2002).

were written in 1976. Under the circumstances described, the present case would be frustrated by the application of an out-of-date Section 90.315(c) rule.

C. Co-channel and Adjacent Channel Protection

12. The present use of UHF-TV Channel 17 in the Gulf region was authorized based on certain separation distances derived to minimize the probability of interference to on-land UHF-TV broadcast stations. Chevron's proposed operations are co-channel with TV Channel 17 and adjacent channel with TV Channel 18. The distance to the closest Channel 17 television station (W17CG, 117.8 miles) is 32 miles closer than the lowest specified distance of 150 miles. However, Chevron proposes to operate at much lower power levels than those set forth in Table 1 of Section 90.315. At a separation of 150 miles, Table 1 allows an Effective Radiated Power (ERP) of 35 watts. Chevron proposes to operate with an ERP of 2 watts. Chevron has submitted a contour analysis which shows that that an operation with an ERP of 2 watts protects the TV Channel 17 broadcast operations in excess of the 65 dB required by Section 90.315(d), Table 1.[32] Chevron also states: "even in the unlikelihood that Chevron would operate a remote site at the "worst case" location, it would use a directional antenna with its azimuth pointed in the general opposite direction from TV station W17CG, reducing the "rearward" ERP below 2 Watts. Thus, Chevron's proposed ERP is well below the level that would potentially cause interference to any operations on TV Channel 17."[33] Chevron also provides a contour study to illustrate how its proposed operations do not cause interference to adjacent TV channel 18 operations, KLTLTV, located 51.5 miles away from the proposed facilities in Lake Charles, LA.[34] Based on the information before us, we find that waiver of Sections 90.315(d) and 90.315(g) is warranted because at the requested power levels Chevron has demonstrated that no interference is anticipated on adjacent or co-channel users in the area.

D. Efficient Technology.

13. Chevron provides a convincing argument that the use of a single 50 kHz channel pair at each location is a more spectrally efficient and cost-effective solution than the use of multiple, smaller bandwidth channels. According to Chevron, the purpose underlying the Commission's bandwidth limitation set forth in Section 90.173(m) is to maximize spectrum use by encouraging the implementation of narrowband or spectrally efficient technology. In this instance, however, Chevron's need for additional bandwidth is not based on a desire to use outdated or inefficient equipment. Indeed, the equipment proposed for use in this application provides a data rate that is more than 3 times the 4800 bps per 6.25 kHz bandwidth required by Section 90.203(j)(3) and provides the equivalent of one voice channel per 6.25 kHz bandwidth required by Section 90.203(j)(5), which applies to equipment manufactured on or after January 1, 2005. Moreover, Chevron has determined that 25 kHz equipment simply will not provide the 128 kb/s capacity required to meet both its voice and data needs to each point of communications and that 50 kHz channels are therefore necessary in order to be able to serve each drill rig or lift boat with a single link. Presently, the same needs are being met through the use of multiple 12.5 kHz and 25 kHz bandwidth UHF radio links to each rig or barge. The proposed use of a single 50 kHz channel pair at each location is a more, rather than less, spectrally efficient approach. Chevron also notes that because its contemplated operations are to be at the low transmitter power of 1 watt, the grant of its application and associated rule waiver requests is unlikely to substantially limit potential spectrum use by other, future applicants."[35] Chevron is technically correct that the operation of four voice channels and one data

[32] *See* Exhibit 2. Chevron Engineering Statement, File Number: 0001109771, (December 23, 2002)

[33] Chevron Engineering Statement, File Number: 0001109771, (December 23, 2002)

[34] *See* Exhibit 5. Chevron Engineering Statement, File Number: 0001109771, (December 23, 2002)

[35] Chevron Waiver Request, FCC File Number: 0001109771, (December 23, 2002)

channel per 50 kHz channel pair exceeds January, 2005 certification standards[36] and also satisfies the Commission's definition of narrowband technology.[37] Based on the facts presented we conclude that the system that Chevron proposes does in fact promote the efficient use of available spectrum.

14. In sum, we conclude, based on the record before us, that the Chevron waiver request should be granted with the conditions as set forth herein. Chevron is required to comply with all rules not specifically waived by this Order. We remind Chevron that they are required to comply with Sections 90.137(a)(2) and 90.137(b) which require that operations at temporary locations exceeding 180 days be subject to frequency coordination and any station remaining at the same location for greater than one year require a separate application specifying the fixed location. Chevron has demonstrated that grant of a waiver is warranted because at the requested power levels no interference is anticipated on adjacent or co-channel users in the area. Furthermore the proposed use does not limit the prospects for other users in the Gulf area. Grant of the waiver would also serve the public interest because the proposed radio system protects the eco-system of the Gulf of Mexico by facilitating Chevron's safety and environmental operations, such as oil spill prevention and detection. We therefore grant Chevron USA, Inc. a waiver of Sections 90.173(m), 90.203(a), 90.209, 90.210(c), 90.315(c), 90.315(d), and 90.315(g) of the Commission's Rules with the condition that its operation cause no interference to any existing licensee. In regards to other licensees we specifically note that Chevron's operation is secondary to TV Channel 17 station (W17CG) and TV Channel 18 (KLTLTV) and must cease operations immediately if its transmissions interfere with the operations of these stations. Consequently, we reserve the discretion to revisit the continuation of such authority should we receive complaints from other licensees in the future.

IV. ORDERING CLAUSES

15. Accordingly, pursuant to Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 1.925 of the Commission's Rules, 47 C.F.R. § 1.925, that the waiver request filed by the Chevron USA, Inc., on December 23, 2002 with respect to FCC File No. 0001109771 IS GRANTED SUBJECT TO THE CONDITIONS set forth herein

16. IT IS FURTHER ORDERED, pursuant and Section 4(i) and 309(a) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), 309(a), that the Public Safety and Critical Infrastructure Division SHALL PROCESS FCC File No. 0001109771 in accordance with this *Order*.

17. This action is taken under delegated authority pursuant to Sections 0.131 and 0.331of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

D'wana R. Terry
Chief, Public Safety and Critical Infrastructure Division
Wireless Telecommunications Bureau

[36] *See* 47 C.F.R. § 90.203(j)(5) ("…the equipment must be capable of supporting a minimum data rate of 4800 bits per second per 6.25 kHz of channel bandwidth.").

[37] Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended and Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, *Second Report and Order and Second Further Notice of Proposed Rule Making*, 18 FCC Rcd. 3036 at n.10 (2003), "For the purpose of this (Order) narrowband technology will refer to the utilization of one voice path per 12.5kHz of spectrum."